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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/933,905	08/22/2001	Omar Alonso	19111.0051	7411
23517	7590	01/14/2005	EXAMINER	
SWIDLER BERLIN SHEREFF FRIEDMAN, LLP			NGUYEN, MERILYN P	
3000 K STREET, NW			ART UNIT	
BOX IP			PAPER NUMBER	
WASHINGTON, DC 20007			2161	

DATE MAILED: 01/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Applicant No.

09/933,905

Applicant(s)

ALONSO ET AL.

Examiner

Merilyn P Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07/12/2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-10,12-19 and 21-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-10,12-19 and 21-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input checked="" type="checkbox"/> Other: <u>Detailed Action</u> . |

DETAILED ACTION

1. In response to the communication dated 07/12/04, claims 1, 3-10, 12-19 and 21-27 are pending in this office action as a result of the cancellations of claims 2, 11, and 20.

Acknowledges

2. Receipt is acknowledged of the following items from the Applicant:
 - The applicant's amendments have been considered and made of record.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-27 stand rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 1, 10, and 19, these claims are being incomplete for omitting essential structural cooperative relationships of elements. The step of "retrieving at least one recommendation for alternative search results relating to the search query...search pattern information" is not related to other limitations in the claim. This step seems to be separated from the other steps. The step of "generating an expanded query based on the received query" is connected to step "receiving from a user a search query requesting information" but not from the retrieving recommendation step. Clarification of the claims is requested.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 3-6, 10, 12-15, 19, and 21-24 are rejected under 35 U.S.C. 103(a) as being unpatentable Pitkow (US 2002/0016786), in view of Kravets (US 6,363,377).

Regarding claims 1, 10, and 19, Pitkow discloses a method of searching comprising the steps of:

- receiving from a user a search query requesting information (See paragraphs [0103], lines 3-4, and [0123], lines 6-8);
- retrieving at least one recommendation for alternative search results relating to the search query (See paragraphs [0100], [0103], lines 5-7, and [0123], lines 8-27), the recommendation based on search pattern information (See paragraphs [0100], [0101], lines 10-13, [0130], lines 12-21, and [0140]);
- generating an expanded query based on the received query (See paragraphs [0103], [0104], and [0123], lines 8-27);
- performing a search using the expanded query to retrieve documents (See paragraph [0105]); and

- presenting the recommendation for alternative search results (See paragraph [0100], lines 7-8) and the retrieved documents (See paragraph [0105], lines 9-11, and also [0124], lines 16-20).

Pitkow is silent as to the recommendation is based on users search query log. On the other hand, Kravets teaches query expansion based on retrieving the recommendation of the prior search query keyword. It would have been obvious to one having ordinary skill in the art at the time of the invention was made to retrieve the recommendation based on users search query logs as suggested by Kravets. The motivation would have been to enhance the reliability of the search results by use more than one information resource for recommendation.

Pitkow teaches the use of clustering the centroids (titles or contents of the documents) of different categories used for searching purpose into number of clusters (See paragraph [0138]).

However, Pitkow does not teach generating and presenting thematic clusters relating to the retrieved documents, the thematic clusters generated by performing linguistic analysis of the retrieved documents using linguistic extraction features themes that describe the retrieved documents. Kravets, teaches generating thematic clusters relating to the retrieved documents (See col. 4, line 47 to col. 5, line 28, Kravets et al.) and presenting the thematic clusters (See col. 5, lines 23-28, Kravets et al.). It would have been obvious to one having ordinary skill in the art at the time of the invention was made to generate thematic clusters relating to the retrieved documents and present them to users as suggested by Kravets. The motivation would have been to return the most relevant themes or phrases by removing all the common stop-words from documents so that user easily review and select desired results (col. 4, lines 50-57, Kravets et al.).

Regarding claims 3, 12, and 21, Pitkow/Kravets discloses wherein the recommendation is further based on user profile information (See paragraph [0123], lines 8-12, Pitkow et al.).

Regarding claims 4, 13, and 22, Pitkow/Kravets discloses wherein the user profile information comprises aggregate information (See paragraph [0120], Pitkow et al.).

Regarding claims 5, 14, and 23, Pitkow/Kravets discloses wherein the at least one recommendation relating to the search query is retrieved from a recommendation database (See paragraph [0097], Pitkow et al.).

Regarding claims 6, 15, and 24, Pitkow/Kravets discloses wherein the recommendation database is generated by performing the steps of:

- performing data mining using users search query logs, user search patterns, and user profile information to generate a plurality of recommendations relating to search query strings based on the users search query logs, user search patterns, and user profile information [See paragraphs [0097], [0122], and [0128], Pitkow et al.);
- generating a data structure including the recommendations relating to search query strings [See [0098], Pitkow et al.); and
- generating a text index based on information in the data structure (See paragraph [0030] and claim 14, Pitkow et al.).

5. Claims 7-9, 16-18, and 25-27 are rejected under 35 U.S.C. 103(a) as being unpatentable Pitkow (US 2002/0016786), in view of Kravets (US 6,363,377), and further in view of Hofmann (US 6,687,696).

Regarding claims 7, 16, and 25, Pitkow/Kravets discloses all the claimed limitation as set forth above. However, Pitkow/Kravets is silent as to disclose populating an initial data structure with recommendations relating to search query strings, including an equivalence table comprising a plurality of terms and/or phrases and equivalents thereof; converting the plurality of terms and/or phrases and equivalents thereof to eXtensible Markup Language format; and validating availability of the recommendations. On the other hand, Hofmann teaches populating an initial data structure with recommendations relating to search query strings, including an equivalence table comprising a plurality of terms and/or phrases and equivalents thereof (See Fig. 7, and Col. 6, line 38 to Col. 7, line 33, Hofmann); converting the plurality of terms and/or phrases and equivalents thereof to eXtensible Markup Language format (130, 131, Fig. 9, and col. 16, lines 29-47, Hofmann et al.); and validating availability of the recommendations (See col. 16, lines 57-67, Hofmann et al.). It would have been obvious to one having ordinary skill in the art at the time of the invention to populate a data structure including a table of terms or phrases and convert those terms or phrases to XML as suggested by Hofmann so that a fast, flexible search system would be provided. Populating table of terms or phrases in XML format would provide standardized format to all web-based search system. Moreover, having the ability of validating the recommendations would enhance the search ability so that resulting more accurate documents.

Regarding claims 8, 17, and 26, Pitkow/Kravets/Hofmann discloses wherein the step of retrieving at least one recommendation relating to a search query string comprises the steps of:

- parsing the received search query to generate a search query string (See paragraph [0103], lines 3-11, Pitkow et al.);
- searching the populated data structure using the search query string to find a key associated with at least one recommendation relating to the search query string (See paragraphs [0097], [0100], Pitkow et al.); and
- retrieving the at least one recommendation relating to the search query string using the key (See paragraph [0100], Pitkow et al.).

Regarding claims 9, 18, and 27, Pitkow/Kravets/Hofmann discloses wherein the step of retrieving at least one recommendation relating to a search query string comprises the steps of:

- parsing the received search query to generate a search query string (See paragraph [0103], lines 3-11, Pitkow et al.);
- searching the populated data structure using the search query string to find a key associated with at least one recommendation relating to the search query string, and if the key is found, retrieving the at least one recommendation relating to the search query string using the key (See paragraphs [0097], [0100], Pitkow et al.); and
- searching the equivalence table of the populated data structure using the search query string to find an alternative key associated with at least one

recommendation relating to the search query string, and retrieving the at least one recommendation for information using the alternative key, if the key is not found (See paragraphs [0100, 0101], Pitkow et al.).

Response to Arguments

6. Applicant's arguments filed on 07/12/2004 about the claim rejection of the last Office Action have been fully considered, but they are not persuasive.

Applicant argues that Pitkow does not disclose or suggest the recommendations are based on search behavior. The examiner respectfully disagrees. Pitkow teaches retaining information on users' browsing habits, which broadly corresponds to search patterns (See [0140], [0100], for example], to provide recommendations for alternative search results. Pitkow is silent as to disclose recommendations are based on users search query logs. However, it was well known in the art at the time of the invention was made to use different information resources for recommendations as suggested by Kravet as addressed above.

Applicant argues that Pitkow does not disclose or suggest generating thematic clusters relating to the retrieved documents by performing linguistic analysis of the retrieved document. The examiner respectfully points out that it would have been obvious to one having ordinary skill in the art at the time of the invention was made to generate categories and clusters based on the retrieved documents as suggested by Kravets as addressed above. Pitkow discloses generating clusters using centroid-based clustering using the titles or contents of documents pointed by bookmarks for the purpose of generating recommendation; therefore, using the

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feature of clustering to organize retrieved documents into thematic clusters would retain relevant information for future use, thus is well known.

Applicant argues that Hofmann does not cure the efficiencies of Pitkow. The examiner respectfully points out that the applicant needs to argue the combination of references and not to argue them separately in a 103 rejection. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marilyn P Nguyen whose telephone number is 571-272-4026.

The examiner can normally be reached on M-F: 8:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Safet Metjahic can be reached on 571-272-4023. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9306 for regular communications and 703-746-7240 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.



MN

January 6, 2005



SAFET METJAHIC
SUPERVISORY PATENT EXAMINER
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